Release: 6/29/01 **Contact: Sharon A. Southard or Amy Collings**
01/83 **609-984-1795 or 609-292-2994**

DEP ISSUES RENEWAL OF PSEG DISCHARGE PERMIT

The Department of Environmental Protection (DEP) announced today the issuance of a renewal permit to PSEG to use water from the Delaware River to operate the cooling system at the Salem Nuclear Generating Station.

"After very careful analysis, we have determined that at this time the applicant has complied with the terms and special conditions in its existing permit," said DEP Assistant Commissioner of Environmental Regulation Dennis Hart. "However, we are imposing additional measures in this renewal. Our main objectives are to minimize fish losses associated with the water intakes and to maximize opportunities to increase fish populations in the Delaware River estuary to further offset these losses."

New conditions in the final permit include a requirement to study the use of light in combination with the sound system, to deter the fish from entering the facility. The use of sound alone has not shown promise for being effective for all species, so a combination of deterrents is being explored, as the best technology available, according to Hart.

In addition, the final permit requires PSEG to continue its wetlands restoration project, continue the review process by the estuary enhancement oversight committee, and refine its biological monitoring program to obtain more accurate data on the plant's impact on fish populations and the effectiveness of the fish ladders and wetlands enhancements. The company also must refine its plant-related sampling and analyses including loss estimates and undertake an updated study of the hydrodynamics at the intakes. DEP also is requiring enhancements to the fish return system associated with the intake traveling screens so that the water is less turbulent and therefore less stressful to the fish.

This permit replaces the permit issued in July 1994. The DEP hired an independent consultant, ESSA Technologies of Toronto, to assist in analyzing parts of the application and held public hearings on the draft permit at the Pennsville Memorial High School January 23, 2001, and on January 25, 2001 at Cumberland County College in Vineland.

The permit issued in 1994 included several conditions to reduce fish mortality and increase fish propagation. Some were required under the Clean Water Act and others were voluntarily proposed by PSEG. These conditions included improved intake screens and fish buckets to reduce the number of fish entering the plant, a limit on intake flow, the study of sounding devices to deter fish from entering the intakes, installation of fish ladders, and a major wetlands restoration project, considered the largest privately funded wetlands restoration project in the nation, to enhance habitat for fish propagation.

The modified intake screens have smaller and less injurious openings that are more effective in reducing fish mortality. Specially designed buckets also help reduce fish mortality by suspending the fish in a curved lip that reduces injury, before the fish are returned to the estuary via the fish return system.

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The permit issued in July 1994 requires the company to restore, enhance or preserve 14,500 acres of wetlands in and around the Delaware estuary to provide more fish breeding and nursery areas, thereby increasing ecological productivity. It specifically requires the company to purchase a minimum of 8,000 acres of degraded wetlands plus 6,000 acres of upland buffers (or an additional 2,000 acres of degraded wetlands). The required work is on-going at eight sites: Alloways Creek, Cohansey River, Maurice River Twp., Commercial Twp., Dennis Twp., the Bayside Tract, and two sites in Delaware – Cedar Swamp and The Rocks.

The restoration projects have 12 years to become successful, and so far all are on track with acceptable levels of vegetative growth recorded and verified in aerial photos and field inspections. Four of the eight sites were dominated by phragmites, and the reduction of phragmites is progressing at all four sites. Phragmities are a tall, widespread, marsh plant that chokes out other plant life and raises ground elevation thus reducing fish habitat, and productivity. Phragmities reduction is progressing through the use of various eradication methods, including a limited use of herbicides.

This permit renewal continues the wetlands restoration and fish ladder related requirements contained in the 1994 permit. To implement these permit requirements, PSEG created the Estuary Enhancement Program (EEP). To date the EEP has restored and/or preserved over 20,500 acres of land in and around the Delaware estuary, making this the largest privately funded wetlands restoration project in the nation.

During the public comment period, the department received extensive written comments as well as public testimony at public hearings. Many parties commented on the EEP and the wetland restoration requirements. While many commenters praised the environmental benefits of the wetland restoration program, some commenters expressed specific concern regarding the continued need to use herbicides to meet restoration goals for portions of the Alloways Creek site.

Given this concern, on June 8 PSEG informed the department of its decision to revise its restoration program for the Alloways Creek site. Specifically, PSEG will cease utilizing herbicides for the management of approximately 1,000 acres of the westerly portion of the Alloways Creek site; retain these phragmities-dominated wetlands; and purchase approximately 1,000 additional acres to ensure compliance with the permit conditions. The department intends to pursue implementation of this decision by PSEG with appropriate refinements, as necessary.

Hart also said that, in response to comments from the U.S. Fish and Wildlife Service, PSEG has agreed to fund the construction of two additional fish ladders in New Jersey, provided suitable sites are available. In addition, PSEG has agreed to fund construction of an artificial reef in New Jersey. These new commitments are included as conditions of this final permit.

Advisory committee members for this project include representatives from the Scripps Institute of Oceanography, Louisiana University Marine Consortium, Stevens Institute of Technology, Chesapeake Biological Laboratory Center, University of Georgia Marine

Institute, National Marine Fisheries Services, U.S. Fish & Wildlife Service, Delaware Estuary Program, State of Delaware and U.S. Environmental Protection Agency (EPA).

Biological monitoring data on fish populations in the Delaware are obtained in accordance with a DEP-approved workplan. The biological monitoring data collected by PSEG compliments the long-term and on-going data collected by the State of Delaware and DEP. This data was used in analyzing the permit application. The analyses show the population trends for most species studied are increasing.

ESSA Technologies, the firm assisting DEP in analyzing portions of the voluminous application, is an international firm with more than 20 years of experience in managing and evaluating environmental and natural resource projects. While this is not the first time DEP has retained an independent consultant to evaluate a New Jersey Pollution Discharge Elimination System (NJPDES) permit, it is the largest NJPDES permit application ever received by the department. ESSA will be paid approximately $300,000 with funds from an assessment added to PSEG's permit fee.

In its 1994 permit, DEP determined that retrofitting the facility with new cooling towers would have involved a complicated and wide-scale construction project entailing substantial costs disproportionate to the environmental benefit. While the Clean Water Act does not call for this type of economic analysis, there was legal precedent for such an analysis, and EPA concurred with DEP in this matter.

The final permit continues to allow the withdrawal of 3.024 billion gallons of water a day, as a monthly average, to cool the reactors, which represents no change from the prior permit conditions. It should be noted that at no time does the cooling water come into direct contact with the two nuclear reactors.

For more information visit http://www.state.nj.us/dep.